

## CLAIMS

1. A telecommunications cabinet assembly comprised of:

- (a) a cabinet framework with a first end and a second end;
- (b) a plurality of DSX-1 jack assemblies mounted on the cabinet framework; and
- (c) at least one multiplexer mounted on the cabinet framework and disposed to be accessed from the first end of the cabinet framework.

2. A telecommunications cabinet assembly as recited in claim 1, and further wherein each jack assembly is comprised of:

- (a) a front panel portion which includes a single column of at least one sleeve for receiving a plug therein;
- (b) a switch assembly support portion; and
- (c) at least one switch assembly positioned within the framework rearward from the corresponding sleeve, the switch assembly being adapted to receive and make electrical contact with a plug inserted in the corresponding sleeve.

3. A telecommunications cabinet assembly as recited in claim 1, and further wherein the plurality of DSX-1 jack assemblies are each removably secured to the first end of the cabinet framework.

4. A telecommunications cabinet assembly as recited in claim 1, and further wherein the plurality of DSX-1 jack assemblies comprise at least forty-two DSX-1 circuits.

5. A telecommunications cabinet assembly as recited in claim 1, and further wherein the at least one multiplexer comprises an M13 multiplexer/demultiplexer.

6. A telecommunications cabinet assembly as recited in claim 1, and further comprising a backplane circuit board assembly electrically connected to the at least one multiplexer and the plurality of DSX-1 jack assemblies.

7. A telecommunications cabinet assembly as recited in claim 1, and further comprising at least one DSX-3 jack assembly mounted on the cabinet framework.

8. A telecommunications cabinet assembly as recited in claim 1, and further wherein the at least one multiplexer is mounted in the same horizontal plane as the plurality of DSX-1 jack assemblies.

9. A telecommunications cabinet assembly as recited in claim 1, and further wherein the at least one multiplexer is comprised of one active and one standby multiplexer.

10. A telecommunications cabinet assembly as recited in claim 1, and further wherein the plurality of multiplexers comprise:

- (a) a high speed transmission line interface unit responsible for signal input-output interface with a set of sending and receiving high speed transmission lines;
- (b) a low speed transmission line interface unit responsible for signal input-output interface with a set of sending and receiving low speed transmission lines; and
- (c) a multiplex converting unit for performing multiplexing and demultiplexing between high speed signals transmitted on the high speed transmission lines and low speed signals transmitted on the low speed transmission lines.

11. A telecommunications cabinet assembly as recited in claim 10, and further wherein the interface between the multiplex converting unit and the switch assemblies comprises an optical fiber interface.

12. A telecommunications cabinet assembly as recited in claim 1, and further comprising:

- (a) a backplane printed circuit board assembly mounted to the cabinet framework; and
- (b) an interconnect printed circuit board electrically coupling the jack assemblies with the backplane printed circuit board assembly.

13. A telecommunications cabinet assembly as recited in claim 1, and wherein the plurality of jack assemblies are disposed to be accessed from the front end of the cabinet framework.

14. A telecommunications cabinet assembly comprised of:

- (a) a cabinet framework with a first end and a second end, and wherein the framework defines a width dimension to a height dimension ratio which is greater than one;
- (b) a plurality of DSX-1 jack assemblies mounted on the cabinet framework; and
- (c) at least one multiplexer mounted on the cabinet framework.

15. A telecommunications cabinet assembly as recited in claim 14, and further wherein the framework defines the width dimension to height dimension ratio at greater than three and less than four.

16. A telecommunications cabinet assembly as recited in claim 14, and further wherein the framework defines the width dimension to be in a range from 14 inches to 24 inches.

17. A telecommunications cabinet assembly as recited in claim 14, and further wherein the framework defines the height dimension to be in a range from 3 inches to 6 inches.

18. A telecommunications cabinet assembly comprised of:

- (a) a cabinet framework with a first end and a second end, the cabinet framework configured to mount to a nineteen inch wide distribution rack;
- (b) at least forty-two DSX-1 jack assemblies mounted on the cabinet framework; and
- (c) at least two multiplexers mounted on the cabinet framework, the at least two multiplexers being electrically connected to the at least forty-two DSX-1 jack assemblies.

19. A telecommunications cabinet assembly as recited in claim 18, and further comprised of a backplane circuit board assembly electrically connected to the at least one multiplexer and the at least forty-two DSX-1 circuits.

20. A telecommunications cabinet assembly comprised of:

- (a) a cabinet framework with a first end and a second end;
- (b) a plurality of DSX-1 jack assemblies mounted on the cabinet framework, each jack assembly being comprised of:
  - (i) a front panel portion which includes a single column of at least one sleeve for receiving a plug therein;
  - (ii) a switch assembly support portion; and
  - (iii) at least one switch assembly positioned within the framework rearward from the corresponding sleeve, the switch assembly being adapted to receive and make electrical contact with a plug inserted in the corresponding sleeve;
- (c) at least one multiplexer mounted on the cabinet framework;
- (d) a backplane circuit board electrically connected to the at least one multiplexer and the plurality of DSX-1 jack assemblies.

21. A telecommunications cabinet assembly as recited in claim 20, and further wherein the backplane circuit board assembly is electrically connected to the at least one multiplexer and the plurality of DSX-1 jack assemblies by a backplane interconnect conductor.

22. A telecommunications cabinet assembly comprised of a cabinet framework with a first end and a second end, the cabinet framework having a vertical height of less than twelve inches, the cabinet framework including a first set of DSX-1 jack assemblies mounted on and disposed to be accessed from the first end of the cabinet framework, a first multiplexer mounted on and disposed to be accessed from the first end of the cabinet framework, the first multiplexer being electrically connected to the first set of DSX-1 jack assemblies;

and wherein there is at least one multiplexer and at least twenty-eight DSX-1 jack assemblies mounted on the cabinet framework.

23. A telecommunications cabinet assembly as recited in claim 22, and further wherein the first multiplexer electrically connected to the first set of DSX-1 jack assemblies through a backplane printed circuit board assembly.

24. A telecommunications cabinet assembly as recited in claim 22, only wherein there are at least two multiplexers and at least fifty-six DSX-1 circuits mounted on the cabinet framework.

25. A telecommunications cabinet assembly as recited in claim 22, only wherein the cabinet framework has a vertical height of less than six inches.

26. A telecommunications cabinet assembly as recited in claim 22, only wherein there are at least two multiplexers and at least fifty-six DSX-1 circuits mounted on the cabinet framework.

27. A telecommunications cabinet assembly comprised of a cabinet framework with a first end and a second end, the cabinet framework having a vertical height of less than twelve inches, the cabinet framework including a first set of DSX-1 jack assemblies mounted on the cabinet framework, a first multiplexer mounted on the cabinet framework, the first multiplexer being electrically connected to the first set of DSX-1 jack assemblies; and wherein the first multiplexer is mounted on a same horizontal plane within the cabinet as the first set of DSX-1 jack assemblies.

28. A telecommunications cabinet assembly comprised of:

- (a) a cabinet framework with a first end and a second end;
- (b) a plurality of DSX-3 assemblies mounted on the cabinet framework; and
- (c) at least one multiplexer mounted on the cabinet framework and electrically connected to the plurality of DSX-3 assemblies.